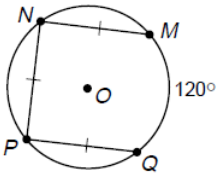
In each circle, O is the center. Find each measure.

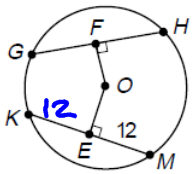
1. $m\widehat{NP}$



360 - 120 =
240

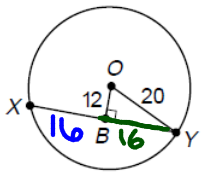
240/3 = 80

2. KM



24

3. XY



$12^2 + b^2 = 20^2$

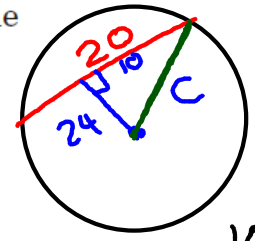
$144 + b^2 = 400$

$b^2 = 256$

$b = 16$

32

4. Suppose a chord is 20 inches long and is 24 inches from the center of the circle. Find the length of the radius.



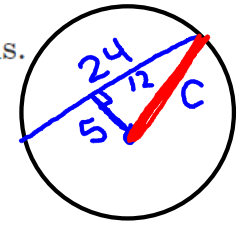
$10^2 + 24^2 = c^2$

$100 + 576 = c^2$

$676 = c^2$

$26 = c$

5. Suppose a chord of a circle is 5 inches from the center and is 24 inches long. Find the length of the radius.



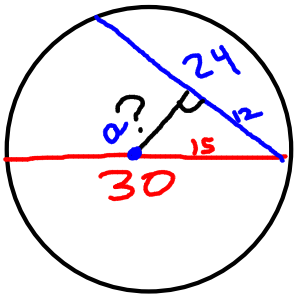
$12^2+5^2=c^2$

$144+25=c^2$

$169=c^2$

$13=c$

6. Suppose the diameter of a circle is 30 centimeters long and a chord is 24 centimeters long. Find the distance between the chord and the center of the circle.



$a^2+12^2=15^2$

$a^2+144=225$

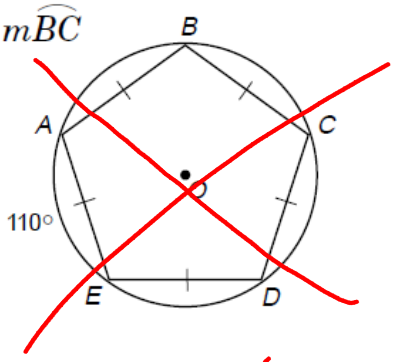
$-144\ \ -144$

$a^2=81$

$a=9$

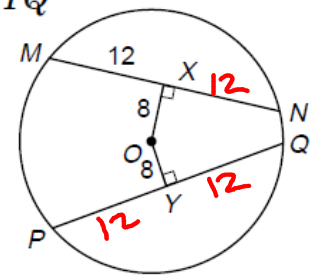
In each figure, O is the center. Find each measure to the nearest tenth.

1. $m\overset{\frown}{BC}$



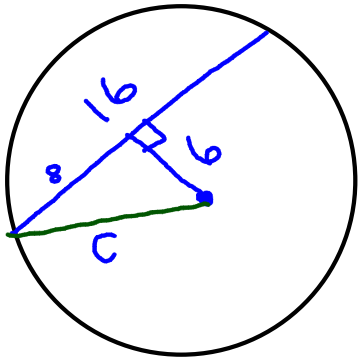
360/5 = 72

2. YQ



12

3. Suppose a chord of a circle is 16 inches long and is 6 inches from the center of the circle. Find the length of a radius.



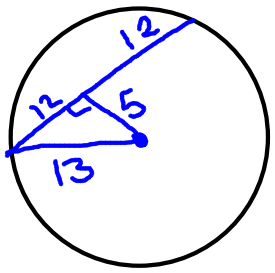
$6^2 + 8^2 = c^2$

$36 + 64 = c^2$

$100 = c^2$

$10 = c$

4. Find the length of a chord that is 5 inches from the center of a circle with a radius of 13 inches.



$5^2+b^2=13^2$

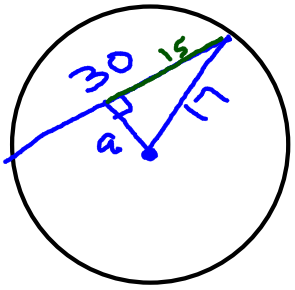
$25+b^2=169$

$b^2=144$

$b=12$

24

5. Suppose a radius of a circle is 17 units and a chord is 30 units long. Find the distance from the center of the circle to the chord.



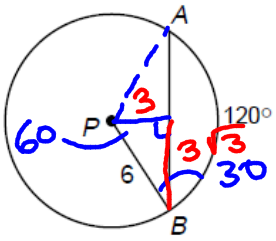
$a^2+15^2=17^2$

$a^2+225=289$

$a^2=64$

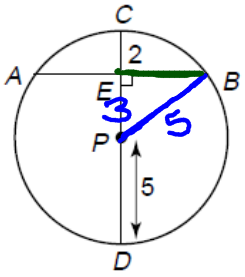
$a=8$

6. Find AB.



$3\sqrt{3} \cdot 2 = 6\sqrt{3}$

7. Find AB



$3^2 + b^2 = 5^2$

$9 + b^2 = 25$

$b^2 = 16$

$b = 4$

(8)